Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The logic of SEELIGER's work rests finally upon the reasonableness of his assumptions and deductions concerning the distribution and density of the zodiacal-light materials; and these are not out of harmony with the meager knowledge of the zodiacal light which we have obtained by direct observation.

In consequence of SEELIGER's results further direct observations of the zodiacal light take on renewed interest.

PLANETARY PHENOMENA FOR JULY AND AUGUST, 1909.

By MALCOLM McNEILL.

PHASES OF THE MOON, PACIFIC TIME.

Full Moon.....	July 3,	4^h 17^m	A.M.	Full Moon....	Aug. 1,	1^h 14^m	P.M.
Last Quarter..	" 9,	10 58	P.M.	Last Quarter..	" 8,	4 10	A.M.
New Moon....	" 17,	2 45	A.M.	New Moon....	" 15,	3 55	P.M.
First Quarter..	" 25,	3 45	A.M.	First Quarter..	" 23,	7 55	P.M.
				Full Moon.....	" 30,	9 8	P.M.

The Earth passes aphelion, its greatest distance from the Sun, July 3d, 7 P.M., Pacific time.

Mercury is a morning star until August 4th, when it passes superior conjunction with the Sun and becomes an evening star, remaining such until October 12th. It reaches greatest west elongation on July 7th, being on that date 21° 12′ west of the Sun. During the first half of July it rises from an hour to an hour and a quarter before sunrise, and may be seen in the morning twilight under good weather conditions, but shortly after the middle of the month it draws too near the Sun for easy observation. After becoming an evening star, in early August, it moves away from the Sun, so that by the end of the month it is well out toward greatest east elongation, but even then it sets less than one hour after sunset, and it will hardly be in reach of naked-eye observation.

Venus is an evening star, setting a little more than an hour after sunset throughout the two months' period. The interval increases only ten minutes from 1^h 10^m on July 1st to 1^h 20^m on August 31st. The apparent distance between Sun and planet increases about 12°, and this would mean an increase of about forty-eight minutes in the interval between the setting of the two bodies, but for the fact that *Venus* is moving southward much faster than the Sun, and this relative southward motion of the planet nearly counterbalances the gain due to increased distance. *Venus* and *Jupiter* are in very close conjunction on the night of August 11th-12th. The nearest approach is 12′, less than half of the apparent diameter of the Moon. This occurs about 11 P.M., Pacific time, some hours after the planets have set for all points in the United States; but the planets will be very close together on the evening of that date.

Mars is gradually drawing near opposition. It rises shortly before $11^h\ 30^m$ on July 1st, and at a little after 8^h P.M. on August 31st. It moves eastward and northward about 15° among the stars with gradually diminishing speed, until August 23d; it then begins its retrograde, westward, motion but moves only about half a degree before the end of the month. It is in the constellation *Pisces* and passes the vernal equinox on the afternoon of July 15th. It does not cross the celestial equator at that time, as it is then in the southern part of its orbit, and is about 5° south of the ecliptic. *Mars* passes perihelion on August 13th, more than a month before opposition. Its distance from the Sun diminishes from 64,000,000 miles to about 38,000,000, and it will be nearly three times as bright on August 31st as it was on July 1st. In fact, it will be within about ten per cent of its maximum brightness at the end of August, and will be very conspicuous.

Jupiter is in the western sky in the evening and forms with *Venus* the most prominent feature of that part of the heavens. On July 1st it sets at about $10^h\ 40^m$ P.M. and on August 31st it sets at a little after 7^h P.M., only a little more than half an hour after sunset. During the last week in August it will be almost too near the Sun for naked-eye observation, but its great brightness may make it possible to follow it to the end of the month. During July and August it moves 11° eastward and 5° southward, from the constellation *Leo* into *Virgo*. Its close conjunction with *Venus* on August 11th has already been noted. On the night of August 24th-25th it is in conjunction with *Mercury,* the nearest approach being 40′, *Jupiter* south of *Mercury;* but both planets are then very close to the Sun, probably too close for *Mercury* to be seen, and *Jupiter* will not be an easy object.

Saturn rises half an hour after midnight on July 1st and at about 8^h 30^m P.M. on August 31st. It is in the eastern part of the constellation *Pisces* and moves about 1° eastward until August 6th, and then begins its westward or retrograde motion. By the end of August it will have moved about half a degree. As seen in the telescope, the rings will have widened out so that the minor axis is a little less than one fourth of the major.

Uranus comes to opposition with the Sun on the evening of July 11th and is then above the horizon the entire night. By the end of August it will set shortly after 1^h A.M. It moves about 2° westward during the two months, in the eastern part of *Sagittarius,* several degrees north and east of the bowl of the "milk-dipper." No bright star is near it, and in consequence it is not easily identified by naked-eye observations.

Neptune is in conjunction with the Sun on July 9th.